

**IN THE CLAIMS:**

Please cancel claim 19. Please also amend claims 15-28 and add new claims 29-31, as shown in the complete list of claims that is presented below.

Claims 1-14 (cancelled).

15. (currently amended) A remote video surveillance server for use between a view station and a plurality of field terminals, comprising:

a number plurality of channel interfaces interface units coupled to the field terminals via E1 channels, each of the channel interfaces interface units coupled to a field terminal and receiving data over an E1 channel from a corresponding one of the field terminals over a corresponding one of the E1 channels, wherein each of the channel interfaces interface units comprises at least comprising a channel transceiver to communicate with the corresponding field terminal, wherein the field terminals is are configured to package audio, video, and alarm data as E1 frames and transport the data over the E1 channel that is channels and the E1 channels are also used to send control information from a originated at the view station to the field terminals;

a network interface coupled to a an Ethernet data network; and

an information process kernel coupled between the channel interfaces units and the network interface, the information process kernel executing instructions for organizing the audio, video, and alarm data received by the channel interface units to be transmitted for transmission on the Ethernet, and forming alarm signals correspondingly from the alarm data data network to the view station and for conveying the control information from the network interface to the channel interface units.

16. (currently amended) The remote video surveillance server of claim 15, wherein the information process kernel ~~depending on~~ employs an IP multicast protocol transmits to transmit the audio and video data to ~~each substation~~ the view station and at least one additional view station.

17. (previously presented) The remote video surveillance server of claim 15, wherein each of the channel ~~interfaces~~ interface units further comprises:

at least one channel transceiver chip;

at least one programmable device;

a memory; and

a processor, coupled to the at least one channel transceiver chip and the at least one programmable device and controlled under a clock signal, for synchronizing the at least one channel transceiver chip and the at least one programmable device to cause the audio and video data to be transferred into the memory and read the audio and video data out of the memory onto a data bus when ~~one of the viewing stations~~ view station is controlled to display the video data and audibly reproduce the audio data.

18. (currently amended) The remote video surveillance server of claim 15, wherein the data network is ~~one or more of Ethernet (E1) and a local area network (LAN).~~

Claim 19 (cancelled).

20. (currently amended) The remote video surveillance server of claim 15, wherein the instructions when executed causes the processor to:

write the data to a PCI bus;

map an address on the PCI bus to an internal bus through an address mapping register;

and

store the data in ~~the~~ a memory when the internal bus is detected to be idle.

21. (currently amended) The remote video surveillance server of claim 15, 17, wherein the instructions when executed causes the processor further to:

read the data out the memory when receiving a data channel number identifying a particular one of the field terminals; and

transmit the data over the data network through the network interface.

22. (currently amended) The remote video surveillance server of claim 5 15, wherein the field terminal ~~is~~ terminals are remotely located with respect to the view ~~stations~~ station.

23. (currently amended) A remote video surveillance system comprising:  
a number plurality of field terminals, each configured to produce ~~and~~ audio, video, and alarm data, the audio, video, and alarm data being packaged to form frames and transported over a dedicated channel;

a number plurality of viewing view stations remotely located with respect to the field terminals; and

a video surveillance server coupled between the field terminals and the viewing view stations, the video surveillance server comprising a number plurality of channel interfaces interface units, each of the channel interfaces interface units being dedicated to a corresponding one of the field terminals and receiving the audio, video, and alarm data from the corresponding one of the field terminals, a network interface coupled to a data network, network, and an information process kernel coupled between the channel interfaces interface units and the network interface, the information process kernel executing instructions for organizing the audio, video, and alarm data received ~~to have the audio and video data transmitted on~~ from the field terminals for transmission over a data network to the view

stations, and forming alarm signals correspondingly from the alarm data for conveying control information received from the view stations over the data network to the channel interface units for transmission to the field terminals.

24. (currently amended) The remote video surveillance system of claim 23, wherein the video surveillance server is configured to act as a multipoint system.

25. (currently amended) The remote video surveillance system of claim 24, wherein the information process kernel depending on employs an IP multicast protocol transmits to transmit the audio and video data to each substation view station.

26. (currently amended) The remote video surveillance system of claim 25, wherein the dedicated channel is channels are an E channels and the data network is a LAN.

27. (currently amended) The remote video surveillance server system of claim 23, wherein the instructions when executed causes the processor to:

write the audio and video data to a PCI bus;

map an address on the PCI bus to an internal bus through an address mapping register;

and

store the audio and video data in a memory when the internal bus is detected to be idle.

28. (currently amended) The remote video surveillance server of claim 27, wherein the instructions when executed causes the processor further to:

read the audio and video data out the memory when receiving a data channel number identifying a particular one the field terminals; and

transmit the audio and video data over the data network through the network interface.

29. (new) The remote video surveillance system of claim 23, wherein the audio, video, and alarm data are transmitted from the field terminals to the view stations in real time.

30. (new) The remote video surveillance system of claim 23, wherein audio data, in addition to the control information, is conveyed from the view stations to the field terminals.

31. (new) The remote video surveillance server of claim 15, wherein audio data, in addition to the control information, is conveyed from the view station to the field terminals.

32. (new) The remote video surveillance server of claim 15, wherein at least one additional view station is coupled to the data network.

33. (new) The remote video surveillance server of claim 15, wherein the audio, video, and alarm data are transmitted to the view station in real time.